

SUPPLEMENTAL FINAL REPORT



***FAR PART 150
NOISE COMPATIBILITY
STUDY PROGRAM***

Crawford, Murphy & Tilly, Inc.
Barnard Dunkelberg & Company
BridgeNet International

SUPPLEMENTAL FINAL REPORT

July 2008

Approval Date October 2010

CHICAGO EXECUTIVE AIRPORT

The preparation of this document was financed in part through a planning grant from the Federal Aviation Administration (FAA) as provided under Section 505 of the Airport and Airway Improvement Act of 1982 as amended by the Airway Safety and Capacity Expansion Act of 1987. The contents do not necessarily reflect the views or policy of the FAA.

Acceptance of this report does not in any way constitute a commitment on the part of the United States to participate in the development depicted herein, nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public law. This document is intended to be a planning document by Chicago Executive Airport. Final decisions concerning implementation of the recommendations shall be made by Chicago Executive Airport.

The Noise Exposure Map and accompanying documentation for the Noise Exposure Map for Chicago Executive Airport, submitted in accordance with FAR Part 150 with the best available information, are hereby certified as true and complete to the best of my knowledge and belief.

In addition, it is hereby certified that the airport sponsor has afforded persons adequate opportunity to submit their views, data, and comments concerning the correctness and adequacy of this draft noise compatibility study and draft noise exposure maps.

Signed: 

Dated: 10/25/10

FAR PART 150 NOISE COMPATIBILITY STUDY PROGRAM

Crawford, Murphy & Tilly, Inc.
Aurora, Illinois

Barnard Dunkelberg & Company
Tulsa, Oklahoma

BridgeNet International
Costa Mesa, California

FEDERAL AVIATION ADMINISTRATION

RECORD OF APPROVAL

14 CFR PART 150 NOISE COMPATIBILITY PROGRAM

CHICAGO EXECUTIVE AIRPORT

PROSPECT HEIGHTS and WHEELING, ILLINOIS

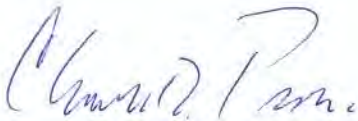


Chicago Airports District Office
Manager

9-30-10
Date

X
Concur

Nonconcur

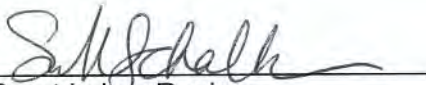


Great Lakes Region
Office of Regional Counsel
Environmental Attorney

9/30/10
Date

X
Concur

Nonconcur



Great Lakes Region
Airports Division Manager

10.1.10
Date

X
Approve

Disapprove

RECORD OF APPROVAL

14 CFR, PART 150 NOISE COMPATIBILITY PROGRAM CHICAGO EXECUTIVE AIRPORT PROSPECT HEIGHTS AND WHEELING, ILLINOIS

INTRODUCTION

The Noise Exposure Maps Update and Noise Compatibility Program Amendment (NEM/NCP) for Chicago Executive Airport (PWK), Prospect Heights and Wheeling, Illinois, describes the current and future non-compatible land uses based upon the parameters as established in 14 C.F.R. Part 150, *Airport Noise Compatibility Planning* (Part 150). On March 1, 2010, FAA accepted the Updated NEMs. These revised NEMs update and replace the NEMs previously accepted on March 23, 1990. The Part 150 NCP Update amends and replaces the fifteen (15) measures approved by FAA on May 29, 1991.

This NCP lists twenty-seven (27) measures, which continue or expand the intent of the previously approved NCP. These measures are grouped into three categories: land use management (16), noise abatement (7), and program management (4). Of the nineteen (19) previously approved measures, seventeen (17) are being carried forward as previously approved continuations with no changes..

Each measure in the airport operator's recommended NCP is identified below, which includes a summary of the recommendations (Issues), the category of the measure (Land Use, Noise Abatement, and Program Management) and a cross reference to page numbers in the NCP where each measure can be found. The current Noise Exposure Map (NEM) (existing 2006) and forecast NEM (2012) are found on Exhibit S1 and Exhibit S2, respectively, of the Supplemental Chapter. The airport sponsor certified that these NEMs are representative of existing and forecast conditions as of the date of submission (see the letter dated February 23, 2010). The Revised Recommendations section, starting on page S.10 of the Supplemental Chapter, deals with recommended noise abatement strategies and land use strategies, along with the program management recommendations.

The approvals listed herein include approvals of actions that the airport recommends be taken by the Federal Aviation Administration. It should be noted that these approvals indicate only that the actions would, if implemented, be consistent with the purposes of Part 150. These approvals do not constitute decisions to implement the actions. Later decisions concerning possible implementation of these actions may be subject to applicable environmental or other procedures or requirements.

The recommendations in this Record of Approval summarize as closely as possible the airport operator's recommendations in the NCP. The statements contained within the summarized recommendations and before the indicated FAA approval, disapproval, or other determinations do not represent the opinions or decisions of the FAA.

LAND USE MANAGEMENT MEASURES

Issue One, Land Use Measure, Sound Attenuate Residential Structures (2009 NCP pages S.12 – S.15 of the Supplemental Chapter)

The Airport will institute a pilot program and will then fully sound attenuate, on a voluntary basis, all residences within the 65 DNL contour surrounding the airport, where acquisition is not feasible or preferred and which are economically feasible to attenuate. Approximately 700 single family residences and 2,700 multi-family residential units are within the 65 DNL noise contour.

FAA Determination: Approved as voluntary. A pilot program would be instituted to determine, through acoustical surveys, what type of sound attenuation is necessary to reduce noise levels to achieve a maximum interior noise level as shown in Table 1, note 1.

Issue Two, Land Use Measure, Purchase Avigation Easements (2009 NCP page S.16)

The Airport would purchase an avigation easement for compensation to a property owner for the impacts related to aircraft operations and to prevent future incompatible development of the property. This measure is a voluntary option to the homeowners who do not want to participate in either the sound attenuation or sale transaction assistance programs.

FAA Determination: Approved as voluntary.

Issue Three, Land Use Measure, School Acoustical Treatment Program (2009 NCP pages S.17 and S.18)

The Airport will sound attenuate, on a voluntary basis, the 2 schools within the 65 DNL contour (Robert Frost Middle School and Oliver Wendell Holmes Middle School). The schools must be attenuated consistent with FAA guidelines.

FAA Determination: Approved as voluntary.

Issue Four, Land Use Measure, Coordinate with Adjacent Communities to Amend Building Codes (2009 NCP pages S.19 and S.20 and 1990 NCP page 7-15, Table 8C, pages 8-11 and 8-14 through 8-20, Exhibit 8E, Table 8F, page 8-30, Table 8G, Table 8H, Table 8I, and Appendix E)

The Airport will work with the local jurisdictions to amend Subdivision Regulations or Building Codes as necessary to include a sound reduction of 25 dB for newly constructed (built after the signing of this Record of Approval) residential units within the 65 DNL, 30dB reduction within the 70 DNL, and 35 dB reduction within the 75 DNL. This is an expansion of approved measure LU-3b of the 1991 ROA.

FAA Determination: Approved. The Federal government has no authority to control local land use; the local government has the authority to implement this measure. Approval of this measure does not commit the FAA to Federal funding assistance.

Issue Five, Land Use Measure, Comprehensive Land Use Plan Assistance (2009 NCP page S.21)

The Airport will assist the City of Prospect Heights and the Village of Wheeling in updating their comprehensive land use plans in order to discourage incompatible development and to encourage or maintain compatible land uses within the 60 DNL.

FAA Determination: Approved. The Federal government has no authority to control local land use; the local government has the authority to implement this measure. Approval of this measure does not commit the FAA to Federal funding assistance.

Issue Six, Land Use Measure, Establish Compatible Use Rezoning In the City of Prospect Heights (1990 NCP pages 7-12, 7-13 and 8-8, Table 8C on page 8-9, pages 8-11 and 8-14, Exhibit 8D, Exhibit 8G, page 8-26, Table 8F, Page 8-30, Table 8G, Table 8H, and Table 8I)

The Municipal Airport Commission will recommend to the City of Prospect Heights the rezoning of vacant residential land south of Palatine Road and generally north of Apple Drive in Prospect Heights for commercial, office or industrial use. This was included and approved as LU-1 of the 1991 ROA.

FAA Determination: Approved. The Federal government has no authority to control local land use; the local government has the authority to implement this measure. Approval of this measure does not commit the FAA to Federal funding assistance.

Issue Seven, Land Use Measure, Establish Compatible Use Rezoning In the Village of Wheeling (1990 NCP page 7-14, Table 8C, pages 8-11 and 8-14, Exhibit 8D, page 8-26, Table 8F, Table 8G, Table 8H, and Table 8I)

The Municipal Airport Commission will recommend to the Village of Wheeling the rezoning of a vacant residentially zoned parcel in Wheeling containing approximately 40 acres. The parcel is located immediately west of the airport on the north side of Palatine Road. The Wheeling Comprehensive Plan designates this area for future industrial use. While only the southeast portion of the parcel is exposed to noise exceeding 60 DNL based on the Noise Compatibility Plan forecast for 1992 and 2011, it is subject to overflights and ground-based airport noise. This was included and disapproved as LU-2 of the 1991 ROA.

FAA Determination: Disapproved for Purposes of Part 150. This measure was disapproved in the 1991 ROA and is also disapproved in this ROA. This measure did not conform to the statutory and regulatory criteria of reducing or preventing noncompatible land uses within the area covered by the noise exposure map. The airport operator's noise exposure map covers the area within the 60 DNL contour. The measure was and is for the most part outside the 60 DNL contour and the area is no longer vacant residential property. It appears that the local government implemented this measure outside the scope of the Part 150 program after the 1991 ROA.

Issue Eight, Land Use Measure, Adopt Noise Overlay Zoning (1990 NCP page 7-15, Table 8C, pages 8-11 and 8-14 through 8-20, Exhibit 8E, Table 8F, page 8-30, Table 8G, Table 8H, Table 8I, and Appendix E)

The Municipal Airport Commission will recommend to the City of Prospect Heights, and the Villages of Mount Prospect and Wheeling, the adoption of noise overlay zoning. Noise Overlay Zoning would apply only to new construction and is intended to establish

special standards within noise-impacted areas to help mitigate the problems caused by aircraft noise. These standards supplement the standards of the underlying zoning classifications.

Continuation of approved measure LU-3a of the 1991 ROA: The proposed standards prohibit dwelling, except transient lodgings from locating inside the 75 DNL contour. In addition, single-family and two family dwellings would be prohibited in zones subject to noise exceeding 70 DNL, and mobile homes from zones exceeding 65 DNL.

FAA Determination: Disapproved in part. Because transient lodging is noncompatible within the 65+ DNL as described in Table 1, that portion of this measure is disapproved for purposes of Part 150. The Federal government has no authority to control local land use; the local government has the authority to implement this measure. Approval of this measure does not commit the FAA to Federal funding assistance.

Continuation of approved measure LU-3c of the 1991 ROA: It is proposed that noise easements and non-suit covenants be secured from all new noise-sensitive development inside the noise overlay zones prior to the issuance of occupancy permits.

FAA Determination: Approved. The Federal government has no authority to control local land use; the local government has the authority to implement this measure. Approval of this measure does not commit the FAA to Federal funding assistance.

Issue Nine, Land Use Measure, Adopt Fair Disclosure/Public Relations Policy (1990 NCP page 7-19, 7-20, Table 8C, pages 8-12, 8-20, 8-26, 8-27, 8-30 Table 8G, page 8-31, Table 8H, and Table 8I)

The Municipal Airport Commission will establish a public relations and government liaison effort to disseminate information about the airport and emphasize local planning. While a legally mandated fair disclosure is not recommended in the Chicago Executive Airport area, a program to heighten public awareness of the airport and the potential impacts of airport noise is recommended. This would involve efforts by airport management and the Commission to inform the public, government officials, real estate people, and lenders about the airport and the need for land use compatibility in the area. Efforts will be made to speak with local chambers of commerce, service clubs, planning commissions, city councils, and boards of trustees and real estate and lender organizations. The wide distribution of the Part 150 study brochure will also be completed. Copies of the final Part 150 Study will be placed in public libraries and at the offices of the airport management and the City and Village Clerk offices for public review. This was included and approved as LU-4 of the 1991 ROA.

FAA Determination: Approved.

Issue Ten, Land Use Measure, Adopt Part 150 Study as a Comprehensive Plan Element (1990 NCP pages 7-20, 7-21, 8-20, 8-21, Exhibit 8D, Table 8C, Table 8F, page 8-30 Table 8G, Table 8H, and Table 8I)

The Municipal Airport Commission will recommend that the relevant findings and recommendations of the Part 150 Study be incorporated as part of the comprehensive plans of the City of Prospect Heights and the Villages of Mount Prospect and Wheeling when the time comes to update or amend them. It is particularly important that the

comprehensive plans reflect the needs to rezone unincorporated land near the airport for commercial or industrial use as soon as possible after it is annexed by either the Village of Wheeling or the City of Prospect Heights, in that these two municipalities have totally surrounded the land in question. This was included and approved as LU-5 of the 1991 ROA.

FAA Determination: Approved. The Federal government has no authority to control local land use; the local government has the authority to implement this measure. Approval of this measure does not commit the FAA to Federal funding assistance.

Issue Eleven, Land Use Measure, Establish Planning Commission Review Guidelines (1990 NCP pages 7-21, Table 8C, pages 8-21 and 8-27, Table 8F, page 8-30, Table 8G, Table 8H, and Table 8I)

The Municipal Airport Commission plans to prepare guidelines for adoption and use by planning commissions, boards of zoning appeals and planning departments in Mount Prospect, Prospect Heights and Wheeling to ensure they consider the impact of airport noise on community development proposals, and special use and variance applications. These guidelines include: determine the sensitivity of the subject land use to aircraft noise exposure levels; discourage the approval or rezonings, variances, conditional uses, and special uses which introduce noise-sensitive development into areas impacted by noise exceeding 60 DNL; locate noise-sensitive public facilities outside the 60 DNL contour, if possible, otherwise require building construction to attenuate interior noise levels to 45 DNL; secure noise easements from noise-sensitive development approved within the 60 DNL contour as defined by the noise overlay zone; use the orientation, design, height and landscaping of noise-compatible uses to the best advantage to screen residences from ground noise generated at the airport; advise prospective developers at the earliest opportunity during building and other land use reviews of the existing and anticipated noise levels over the property under consideration; and advise the airport management of the development proposals involving noise-sensitive land uses within the noise overlay zones, beneath flight tracks or near areas of frequent noise complaints. This was included and approved as LU-6 of the 1991 ROA.

FAA Determination: Approved. The Federal government has no authority to control local land use; the local government has the authority to implement this measure. Approval of this measure does not commit the FAA to Federal funding assistance. Funding eligibility for mitigation below 65 DNL requires local land use jurisdictions to adopt a lower threshold

Issue Twelve, Land Use Measure, Construct a Noise Barrier (1990 NCP Exhibit 6C, pages 6-12, 6-13, and 6-29 through 6-31, Table 8C, pages 8-23 and 8-27, Table 8F, Table 8G, Table 8H, and Table 8I)

The Municipal Airport Commission plans to construct an eight-foot high noise fence on top of the existing ten-foot high noise berm along Wolf Road. This noise fence is recommended as a short-term measure to reduce the impacts of sideline takeoff and landing noise. This measure will be necessary only as long as the Debra Lane residential area continues to exist. It is anticipated that this area will be developed for industrial use in accordance with the Wheeling Comprehensive Plan. This was included and disapproved as LU-7 of the 1991 ROA.

FAA Determination: Disapproved. The existing noise berm penetrates the FAR Part 77 primary surface. An eight-foot high noise fence would penetrate the primary surface even further.

Issue Thirteen, Land Use Measure, Fee Simple Purchase of Land North of Airport (2009 NCP pages S.10 and S.11 and 1990 NCP 7-22, 7-23, Table 8C, Exhibit 8D, pages 8-21 and 8-22, Exhibit 8F, page 8-27, Table 8F, Table 8G, Table 8H, Table 8I, and the Sponsor's March 8, 1991 Letter)

The Municipal Airport Commission originally proposed the acquisition of twenty properties north and east of the airport off the north end of Runway 16-34. These properties were shown on Exhibit 8D of the 1990 NCP. Eight were residences, four were residences/businesses and the remainder were vacant. All of the parcels were acquired by the airport before and after the 1991 ROA. This was included and approved as LU-8 of the 1991 ROA.

FAA Determination: No action required. According to the Sponsor, the prior approved measure was completed.

Issue Fourteen, Land Use Measure, Redevelopment of Area South of the Airport (2009 NCP page S.4 and 1990 NCP 7-22, 7-23, Table 8C, Exhibit 8D, page 8-22, Exhibit 8G, pages 8-23 and 8-27, Table 8F, Table 8G, Table 8H, and Table 8I)

The Municipal Airport Commission, in conjunction with the City of Prospect Heights, plans to undertake a redevelopment program for the multi-family residential buildings mostly within the 70 DNL contour south of the airport between Palatine Road and Apple Drive on both sides of Burning Bush Lane in the City of Prospect Heights. The City of Prospect Heights, in addition to the acquisition program described below, plans to undertake rezoning of the land acquired and adjacent to land south of Palatine Road, extending approximately 550 feet south, for office-industrial/commercial-industrial use. This is described above in Issue Six, Establish Compatible Use Rezoning In the City of Prospect Heights. All of this land is within the 60 DNL and above contour.

Continuation of approved measure LU-9a of the 1991 ROA: The City of Prospect Heights plans to acquire the residential properties most severely impacted by noise (previously within the 70 DNL and 75 DNL noise contours, and according to Exhibit S-2 on page S.4 of the 2009 NCP, will be within the 60 DNL and 65 DNL contours). According to a March 8, 1991 letter from the Sponsor, the area to be acquired consists of thirty-nine multifamily residential buildings south of the airport. These properties are shown on Exhibit 8G of the 1990 NCP. Although no appraisal was conducted of the buildings, it was estimated that the cost to purchase the buildings, demolish them and relocate the tenants in 1991 dollars was approximately \$15,000,000. The City does not intend to seek funding from other sources for acquisition of the properties. It is recognized that the total amount needed for the acquisition would not be available in any one fiscal year. It is also recognized that a recovery of a certain amount of the expense would be possible through the sale or reuse of the property purchased. Funding for the project would be scheduled over a five year period to provide for the acquisition in manageable increments and allow for any recovery of funds.

FAA Determination: Disapproved in part. The portion of this measure that is outside of the 65 DNL does not conform to the statutory and regulatory criteria of reducing or

preventing noncompatible land uses within the area covered by the noise exposure map. Although the airport operator's noise exposure map identifies the area within the 60 DNL contour in the 2009 NCP, the local jurisdictions have not adopted a threshold different from the 65 DNL. The measure is for the most part outside the 65 DNL contour, therefore most of the residences are located in an area outside of the 65 DNL contour and are deemed compatible.

Continuation of approved measure Lu-9b of the 1991 ROA: The City of Prospect Heights, as part of the redevelopment program for the area south of the airport, would also include the following elements: redevelop the properties that have seriously deteriorated structures through the use of tax increment financing or other public initiated program and the land use would be converted to office-commercial or other noise-compatible development; improve internal traffic circulation by building an east-west road linking Wolf Road and Milwaukee Avenue and a north-south road linking Palatine and Old Willow Roads; develop the open space south of Piper Lane/Apple Drive as a public Park; create a high-quality commercial center by expanding and improving the retail uses along Milwaukee Avenue, between Palatine Road and Willow River Garden Apartments; redevelop the thin tract of land between Old and New Palatine Roads for office-industrial uses; maintain and improve airport-related commercial uses north of the airport administration building on Milwaukee Avenue; and gradually phase out commercial uses unrelated to the airport along Wolf Road at the southwest corner of the airport as suggested in the Airport Master Plan.

FAA Determination: Disapproved in part. Approval is limited to noncompatible land uses within the 65 DNL. The redevelopment is disapproved for the building acquisition area described above that is outside of the 65 DNL noise contour.

NOISE ABATEMENT MEASURES

Issue One, Noise Abatement Measure, Voluntarily Implement NBAA Noise Abatement Departure Procedure (2009 NCP page S.22 and 1990 NCP pages 6-24, 6-25, Table 6A, pages 8-2 through 8-4, Table 8A, pages 8-24 and 8-25, Exhibit 8H, Table 8F, Table 8G, Table 8H, and Table 8I)

The Airport will continue to request that all jet pilots implement the National Business Aviation Association (NBAA) standard noise abatement procedure. The Airport will notify all Fixed Base Operators, based jet owners and frequent transient operators of the recommendation to use the procedure. This is a continuation of NA-1 of the 1991 ROA.

FAA Determination: Approved as voluntary, subject to wind, weather, traffic and safety conditions. The program continuation would reduce the number of people affected by aircraft noise when conditions are appropriate to use the departure procedure.

Issue Two, Noise Abatement Measure, Implement Left Turn Procedure on Southern Departure, when feasible (2009 NCP page S.23 and S.24)

The Airport will request that all jet pilots implement a left turn for southern departures off Runway 16/34. This type of departure can be used only when there are no airspace conflicts with O'Hare traffic, and it is anticipated to affect approximately 10 percent of the departing Chicago Executive Airport traffic. This turn could only be accomplished when

O'Hare traffic is landing on Runways 14L and 14R or landing on Runways 14R and 9R. This would result in aircraft over flying park land and not residential areas, and would reduce the number of people within the 65 DNL and greater noise contours. The Airport will notify all Fixed Base Operators, based jet owners and frequent transient operators of the recommendation to continue to use the procedure.

FAA Determination: Approved as voluntary subject to wind, weather, traffic and safety conditions. The program continuation would reduce the number of people within the 65 DNL and greater noise contours.

Issue Three, Noise Abatement Measure, Establish Runway 34 Departure Procedures (1990 NCP pages 6-9, 6-10, Exhibit 6B, pages 6-22 and 6-23, Exhibit 6G, page 6-24, Table 6A, pages 8-2 and 8-4, Table 8A, pages 8-25 and 8-27, Table 8F, Table 8H, and Table 8I)

The Municipal Airport Commission recommends that turbojet and turbo fan aircraft departing Runway 34 should turn to a heading of 310 degrees until passing Lake-Cook Road (10.4 DME from Chicago O'Hare VOR). All other aircraft types departing Runway 34 are recommended to be assigned departure vectors in accordance with existing procedures calling for a dispersion of aircraft north of the airport. The assignment of a high performance aircraft to a single initial departure heading will allow for the channelization of departure noise north of the airport to the least populated areas. This measure may be implemented by the issuance of a Standard Instrument Departure (SID) procedure. The FAA Tower will be asked by the Municipal Airport Commission to implement these procedures subject to the authority of the pilot in command to request and amend the departure clearance pursuant to FAR-94.73. The Municipal Airport Commission will erect signs at the ends of the runways informing pilots of noise abatement procedures. This would result in aircraft over flying commercial/industrial land and not residential areas, and would reduce the number of people within the 65 DNL and greater noise contours. This is a continuation of NA-2 of the 1991 ROA.

FAA Determination: Approved as voluntary, subject to wind, weather, traffic and safety conditions.

Issue Four, Noise Abatement Measure, Establish Nighttime Noise Level Maximums (1990 NCP pages 6-25 through 6-27, Exhibit 6I, Table 6A, pages 8-2, 8-4 and 8-5, Table 8A, pages 8-25 and 8-26, Table 8F, and Table 8I)

The Municipal Airport Commission proposes to restrict nighttime departure operations to aircraft having takeoff noise levels less than or equal to 89 EPNdB and nighttime arrival operations to aircraft having approach noise levels less than or equal to 102 EPNdB. Both values are as certified under Federal Aviation regulation Part 36. This will limit operations by the noisiest aircraft to the daytime hours 07:00 AM to 10:00 PM. This would reduce the number of people within the 65 DNL and greater noise contours. This was included and disapproved as NA-3 of the 1991 ROA.

FAA Determination: Disapproved. The data contained in the 1990 NCP was developed in 1987, and it was and is not clear whether the types of aircraft affected at Chicago Executive Airport have changed since then. In addition, the document does not provide information on the impacts on the users affected by the partial curfew; i.e. are they

recreational, business, itinerant; will the affected users be able to shift hours and not be affected or will having to use another local airport disrupt business?

Issue Five, Noise Abatement Measure, Establish Nighttime Noise Run-up Prohibition (1990 NCP pages 6-28, Table 6A, pages 8-26, Table 8F, page 8-30, Table 8G, Table 8H, and Table 8I)

The Municipal Airport Commission plans to adopt a policy which prohibits routine maintenance run-ups between the hours of 10:00 PM and 7:00 AM, except as necessary preparation to an imminent takeoff. The policy will prevent initiation of potentially offensive single event activity, however, the policy will not affect existing or future projected noise contours. The policy of nighttime run-up restrictions, to be endorsed by the airport sponsor communities by ordinance, would be communicated to each resident FBO and other based operators providing maintenance services. Clauses prohibiting nighttime maintenance run-ups would be incorporated into each new lease as it is developed or renewed. This was included and approved as NA-4 of the 1991 ROA.

FAA Determination: Approved as voluntary. The Airport Commission would implement this policy through negotiated leases (the measure will not be a mandatory measure in the lease) with each resident FBO and other based operators providing maintenance service.

Issue Six, Noise Abatement Measure, Establish Orientation Markings on Hold Aprons or Runway 16-34 (1990 NCP pages 6-28, 6-29, Table 6A, pages 8-3, 8-5, Table 8A, page 8-26, Table 8F, page 8-30, Table 8G, Table 8H, and Table 8I)

The Municipal Airport Commission will encourage use of the most beneficial aircraft orientations for noise abatement as indicated on aircraft orientation markings to be installed on the hold aprons of Runway 16-34. The pattern of noise created by a stationary aircraft creates differing noise levels depending on the orientation of the aircraft to the receptor. Consequently, the orientation of the aircraft to point the area of least exposure toward nearby noncompatible use will assist in the reduction of ground noise levels. The marking at the north end of the runway would orient the aircraft with its nose to a heading of 190 degrees, while a heading of 315 degrees would be most appropriate at the south end of the runway. This would reduce the number of people within the 65 DNL and greater noise contours. This was included and approved as NA-5 of the 1991 ROA.

FAA Determination: Approved.

Issue Seven, Noise Abatement Measure, Construct Portion of Parallel Taxiway on the West Side of Runway 16-34 (1990 NCP page 6-11, Exhibit 6C, pages 6-12 and 6-28, Table 6A, pages 8-3 and 8-5, Table 8A, pages 8-26 and 8-31, Table 8H, and Table 8I)

The Municipal Airport Commission recommends the construction of a portion of the planned parallel taxiway on the west side of Runway 16-34. The construction of approximately 2,150 feet of general aviation taxiway connecting the west and southwest groundside facilities will result in the elimination of the need to hold departing aircraft (and their associated ground noise impacts) on the aprons at the ends of Runway 16/34 while arrival traffic lands and back taxis on the runway to an available taxiway. The construction of a portion of the proposed full-length west taxiway will assist the reduction

of significant single event noise and a major source of noise complaints. This was included and disapproved as NA-6 of the 1991 ROA.

FAA Determination: No action required. The prior measure was completed outside of the Part 150 process.

PROGRAM MANAGEMENT MEASURES

Issue One, Program Management Measure, Install Noise Monitoring/Flight Track System (2009 NCP pages S.25 and S.26)

The Airport would install and hire a consultant to run a permanent noise monitoring system, and in the interim would hire a consultant to do seasonal monitoring until the permanent system is in place.

FAA Determination: Approved. The permanent noise monitoring system would monitor noise levels and compliance with the noise abatement measures. For purposes of aviation safety, this approval does not extend to the use of monitoring equipment for enforcement purposes by in-situ measurement of any preset noise thresholds and shall not be used for mandatory enforcement of any voluntary measure.

Issue Two, Program Management Measure, Conduct Operations review and Part 150 Update (2009 NCP pages S.27 and S.28 and 1990 NCP pages 8-34 and 8-35, and Table 8I)

The Airport would be responsible for updating and monitoring the Part 150 Study (the NEMs, and the NCP, if needed) at five-year increments or when there is a significant change in aircraft types or numbers of operations at the Airport. This is an expansion of the approved measures OM-2 and OM-4 of the 1991 ROA.

FAA Determination: Approved.

Issue Three, Program Management Measure, Establish a Follow-Up Committee (2009 NCP pages S.29 and S.30 and 1990 NCP page 8-34 and Table 8I)

The Airport will establish a committee, similar to the one that was formed to assist with the Part 150 study Update, to monitor programs implemented as a result of this ROA and to establish the noise monitoring program. This is an expansion of the approved measure OM-1 of the 1991 ROA.

FAA Determination: Approved as voluntary.

Issue Four, Program Management Measure, Noise Complaint Response (1990 NCP pages 5-34, 5-37 and 8-35, and Table 8I)

The Municipal Airport Commission plans to establish and maintain a noise complaint response function. The noise complaint function of the airport staff refers to those activities which record and analyze noise complaints. The include compilation of a noise complaint file, initial response to those complaining, follow up actions/evaluation of individual complaints, where possible, and recurrent reports. The latter, recurrent

reports, would outline any trends which may require refinements to the NCP. Sample forms are included in Appendix E of the 1990 NCP.

FAA Determination: Approved. Any revisions to the NCP will be subject to the same Part 150 requirements as the original study.

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FAR Part 150 Noise Exposure Map Checklist

I. IDENTIFICATION AND SUBMISSION OF MAP DOCUMENT:	Page Number
A. Is this submittal appropriately identified as one of the following, submitted under FAR Part 150:	Yes, Cover, Cover Letter
1. A NEM only	N/A
2. A NEM and NCP	Yes
3. A revision to NEMs which have previously been determined by FAA to be in compliance with Part 150?	N/A
B. Is the airport name and the qualified airport operator identified?	Yes, Cover
C. Is there a dated cover letter from the airport operator which indicates the documents are submitted under Part 150 for appropriate FAA determination?	Yes
II. CONSULTATION: [150.21 (b), A150.(a)]	
A. Is there a narrative description of the consultation accomplished, including opportunities for public review and comment during map development?	Yes, S.32, I.1, Appendix
B. Identification of consulted parties	
1. Are the consulted parties identified?	Yes, S.32, I.1, Appendix
2. Do they include all those required by 150.21 (b) and A150.105 (a)?	Yes, I.1, Appendix
3. Agencies in 2., above correspond to those indicated On the NEM?	
C. Does the documentation include the airport operator's certification, and evidence to support it, that interested persons have been afforded adequate opportunity to submit their views, data, and comments during map development and in accordance with 150.21 (b)?	Yes, Cover Letter, I.1, Appendix

- D. Does the document indicate whether written comments were received during consultation and, if there were comments, that they are on file with the FAA region? Yes, S.32, I.1, Appendix

III. GENERAL REQUIREMENTS: [150.21]

- A. Are there two maps, each clearly labeled on the face with year (existing condition year and 5-year)? Yes, S.3, S.4
- B. Map currency:
1. Does the existing condition map year match the year on the airport operator's submittal letter? No, S.3
 2. Is the 5-year map based on reasonable forecasts and other planning assumptions and is it for the fifth calendar year after the year of submission? No, S.4
 3. If the answer to 1 and 2 above is no, has the airport operator verified in writing that data in the documentation are representative of existing condition and 5-year forecast conditions as of the date of submission? Yes, Cover Letter
- C. If the NEM and NCP are submitted together:
1. Has the airport operator indicated whether the 5-year map is based on 5-year contours without the program vs. contours if the program is implemented? Yes, Cover Letter
 2. If the 5-year map is based on program implementation:
 - a. are the specific program measures which are reflected on the map identified? Yes, S.11
 - b. does the documentation specifically describe how these measures affect land use compatibilities depicted on the map? Yes, F.11, F.14
 3. If the 5-year NEM does not incorporate program implementation, has the airport operator included an additional NEM for FAA determination after the program is approved which show program implementation conditions and which is intended to replace the 5-year NEM as the new official 5-year map? N/A

IV. **MAP SCALE, GRAPHICS, AND DATA REQUIREMENTS:**

[A150.101,A150.103, A150.105, 150.21 (a)]

- A. Are the maps of sufficient scale to be clear and readable (they must not be less than 1" to 2,000') and is the scale indicated on the maps? Yes, S.3, S.4, Separate Submittal
- B. Is the quality of the graphics such that required information is clear and readable? Yes, S.3, S.4
- C. Depiction of the airport and its environs.
1. Is the following graphically depicted to scale on both the existing condition and 5-year maps:
- a. Airport boundaries Yes, S.3, S.4
- b. Runway configurations with runway end numbers Yes, S.3, S.4
2. Does the depiction of the off-airport data include:
- a. A land use base map depicting streets and other identifiable geographic features Yes, S.3, S.4
- b. The area within the 65 DNL dB (or beyond, at local discretion) Yes, S.3, S.4
- c. Clear delineation of geographic boundaries and the names of all jurisdictions with the 65 DNL dB (or beyond, at local discretion) Yes, S.3, S.4
- D. 1. Continuous contours for at least the DNL 65, 70, 75 and dB? Yes, S.3, S.4
2. Based on current airport and operational data for the existing condition year NEM, and forecast data for the 5-year NEM? Yes, S.3, S.4
- E. Flight tracks for the existing condition and 5-year forecast time frames (these may be on supplemental graphics which must use the same land use base map as the existing conditioned and 5-year NEM), which are numbered to correspond to accompanying narrative? Yes, C.49-C.52
- F. Locations of any noise monitoring sites (these may be on supplemental graphics which must use the same land use base map as the official NEMs) Yes, C.28

- G. Non-compatible land use identification:
1. Are non-compatible land uses within at least the 65 DNL dB depicted on the maps? Yes, S.3, S.4
 2. Are noise sensitive public buildings identified? Yes, S.3, S.4
 3. Are the non-compatible uses and noise sensitive public buildings readily identifiable and explained on the map legend? Yes, S.3, S.4
 4. Are compatible land uses, which would normally be considered non-compatible, explained in the accompanying narrative? N/A

V. **NARRATIVE SUPPORT OF MAP DATA:** [150.21 (a), A150.1, A150.101, A150.103]

- A. 1. Are the technical data, including data sources, on which the NEMs are based adequately described in the narrative? Yes, A.1-A.24, S.5-S.9, Appendix
2. Are the underlying technical data and planning assumptions reasonable? Yes, A.1-A.24, S.5-S.9
- B. Calculation of Noise Contours:
1. Is the methodology indicated? Cover Letter, S.2,
 - a. Is it FAA approved? Yes, S.2
 - b. Was the same model used for both maps? Yes
 - c. Has AEE approval been obtained for use of a model other than those which have previous blanket FAA approval? N/A
 2. Correct use of noise models:
 - a. Does the documentation indicate the airport operator has adjusted or calibrated FAA-approved noise models or substituted one aircraft type for another? No
 - b. If so, does this have written approval from AEE? N/A
 3. If noise monitoring was used, does the narrative indicate that Part 150 guidelines were followed? Yes, S.2
 4. For noise contours below 65 DNL dB, does the supporting documentation include explanation of local reasons? (Narrative explanation is highly desirable but not required by the Rule.) N/A

- C. Noncompatible Land Use Information:
1. Does the narrative give estimates of the number of people residing in each of the contours (DNL 65, 70 and 75, at a minimum) for both the existing condition and 5-year maps? Yes, S.8-S.9
 2. Does the documentation indicate whether Table 1 of Part 150 was used by the airport operator? Yes, Cover Letter, D.3, S.7
 - a. If a local variation to Table 1 was used:
 - (1) does the narrative clearly indicate which adjustments were made and the local reasons for doing so? N/A
 - (2) does the narrative include the airport operator's complete substitution for Table 1? N/A
 3. Does the narrative include information of self-generated or ambient noise where compatible/non-compatible land use identifications consider non-airport/aircraft sources? N/A
 4. Where normally non-compatible land uses are not depicted as such on the NEMs, does the narrative satisfactorily explain why, with reference to the specific geographic areas? N/A
 5. Does the narrative describe how forecasts will affect land use compatibility? Yes, D.2-D.27, S.8-S.9

VI. MAP CERTIFICATIONS: [150.21 (b), 150.21 (e)]

- A. Has the operator certified in writing that interested persons have been afforded adequate opportunity to submit views, data, and comments concerning the correctness and adequacy of the draft maps and forecasts? Yes, Cover Letter
- B. Has the operator certified in writing that each map and description of consultation and opportunity for public comment are true and complete? Yes, Cover Letter, Maps

FAR Part 150 Noise Compatibility Program Checklist

I. IDENTIFICATION AND SUBMISSION OF PROGRAM:	Page Number
A. Submission is properly identified:	
1. FAR 150 NCP?	Yes, Cover, Cover Letter
2. NEM and NCP together?	Yes
3. Program revision?	N/A
B. Airport and Airport Operator's name identified?	Yes, Cover, Flysheet
C. NCP transmitted by airport operator cover letter?	Yes
 II. CONSULTATION:	
A. Documentation includes narrative of public participation and consultation process?	Yes, S.32, I.1-I.2, Appendix
B. Identification of consulted parties:	
1. All parties in 150.23(c) consulted?	Yes, I.1, Appendix
2. Public and planning agencies identified?	Yes, I.1, Appendix
3. Agencies in 2., above, correspond to those indicated on the NEM?	Yes, I.1, Appendix
C. Satisfies 150.23(d) requirements:	
1. Documentation shows active and direct participation of parties in B, above?	Yes, I.1, Appendix
2. Active and direct participation of general public?	Yes, S.32, I.1, Appendix
3. Participation was prior to and during development of NCP and prior to submittal to FAA?	Yes, S.32, I.1, Appendix
4. Indicates adequate opportunity afforded to submit views, data, etc.?	Yes, S.32, I.1, Appendix

- | | |
|---|--------------------------|
| D. Evidence included of notice and opportunity for a public hearing on NCP? | Yes, S.32, Appendix |
| E. Documentation of comments: | |
| 1. Includes summary of public hearing comments, if hearing was held? | Yes, S.32, I.1, Appendix |
| 2. Includes copy of all written material submitted to operator? | Yes, Appendix |
| 3. Includes operator's responses/disposition of written and verbal comments? | Yes, Appendix |
| F. Informal agreement received from FAA on flight procedures? | N/A |
|
III. NOISE EXPOSURE MAPS: [150.23,B150.3, B150.35 (f)]
(This section of the checklist is not a substitute for the Noise Exposure Map checklist. It deals with maps in the context of the Noise Compatibility Program submission.) | |
| A. Inclusion of NEMs and supporting documentation: | |
| 1. Map documentation either included or incorporated by reference? | Yes, S.3, S.4 |
| 2. Maps previously found in compliance by FAA? | N/A |
| 3. Compliance determination still valid? | N/A |
| 4. Does 180-day period have to wait for map compliance finding? | N/A |
| B. Revised NEMs submitted with program:
(Review using NEM checklist if map revisions included in NCP submittal) | |
| 1. Revised NEMs included with program? | N/A |
| 2. Has airport operator requested FAA to make a determination on the NEM(s) when NCP approval is made? | N/A |
| C. If program analysis used noise modeling: | |
| 1. INM or HNM, or FAA-approved equivalent? | Yes, S.2 |
| 2. Monitoring in accordance with A150.5? | Yes, S.2 |
| D. Existing condition and 5-year maps clearly identified as the official NEMs? | Yes, S.3, S.4 |

IV. CONSIDERATION OF ALTERNATIVES: [B150.7, 150.23 (e)]

- A. At a minimum, are the alternatives below considered?
1. Land acquisition and interest therein, including air rights, easements, and development rights? Yes, S.16
 2. Barriers, acoustical shielding, public building soundproofing Yes, S.12-S.15, S.17-S.18
 3. Preferential runway system Yes, F.19
 4. Voluntary Flight procedures Yes, S.22-S.24
 5. Restrictions on type/class of aircraft (as least one restriction below must be considered) taking into account applicable legislation (49 U.S.C 47521 et. seq.), powers and duties of the Administrator, and grant assurances.
 - a. deny use based on Federal standards Yes, E.4-E.6
 - b. capacity limits based on noisiness Yes, E.4-E.6
 - c. mandatory noise abatement takeoff/approach procedures Yes, E.12-E.13
 - d. landing fees based on noise or time of day Yes, E.5-E.6
 - e. nighttime restrictions Yes, F.3-F.4
 6. Other actions with beneficial impact not listed herein Yes, F.1-F.25
 7. Other FAA recommendations (see D, below) N/A
- B. Responsible implementing authority identified for each Considered alternative? Yes
- C. Analysis of alternative measures:
1. Measure clearly described? Yes, S.12-S.31
 2. Measures adequately analyzed? Yes, S.12-S.31
 3. Adequate reasoning for rejecting alternatives? Yes, F.1-F.25
- D. Other actions recommended by the FAA:
- Should other actions be added? N/A
- (List separately, or on back, actions and discussions with airport operator to have them included prior to the start of the 180-day cycle. New measures adopted by the airport sponsor must be subject to consultation before they can be submitted to the FAA for action. (See E., below)

V. ALTERNATIVES RECOMMENDED FOR IMPLEMENTATION:

[150.23 (e), B150.7, B150.35 (b), B150.5]

A. Document clearly indicates:

- | | |
|--|-------------------------------|
| 1. Alternatives recommended for implementation?
not those of consultant or third party? | Yes, S.1-S.32
Cover Letter |
|--|-------------------------------|

B. Do all program recommendations:

- | | |
|---|---------------|
| 1. Relate directly or indirectly to reduction of noise
and noncompatible land uses?
(Note: All program recommendations, regardless of
Whether previously approved by the FAA in an earlier
Part 150 study, must demonstrate a noise benefit if the
airport sponsor wants FAA to consider the measure for
approval in a program update. See E., below) | Yes, S.1-S.32 |
| 2. Contain description of contribution to overall
effectiveness of program? | Yes, S.1-S.32 |
| 3. Noise/land use benefits quantified to extent possible? | S.3-S.4 |
| 4. Include actual/anticipated effect on reducing noise
exposure within noncompatible area shown on NEM? | Yes, S.1-S.32 |
| 5. Effects based on relevant and reasonable expressed
assumptions? | Yes, S.1-S.32 |
| 6. Have adequate supporting data to support its contribution
to noise/land use compatibility? | Yes, S.1-S.32 |

**C. Analysis appears to support program standards
set forth in 150.35 (b) and B150.5?**

Yes, S.1-S.4

D. When use restrictions are recommended:

- | | |
|---|-----|
| 1. Does (or could) the restriction affect Stage 2 or Stage 3
aircraft operations (regardless of whether they presently
operate at the airport)? (If restriction affects Stage 2 helicopters,
Part 161 also applies.) | N/A |
| 2. If the answer to 1. is yes, has the airport operator completed
the Part 161 process and received FAA Part 161 approval
for a restriction affecting Stage 3 aircraft? For restrictions
affecting only Stage 2 analysis and consultation process re-
quired by Part 161? | N/A |
| 3. Are alternative with potentially significant noise/compatible
land use benefits thoroughly analyzed so that appropriate
comparisons and conclusions can be made? | |
| 4. Did the FAA regional or ADO reviewer coordinate the use | |

restriction with APP-600 prior to making determination on start of 180-days?

- E. Do the following also meet Part 150 analytical standards:
1. Formal recommendations which continue existing practices? Yes, S.10-S.11
 2. New recommendations or changes proposed at end of Part 150 process? Yes, 1.12-S.32
- F. Documentation indicates how recommendations may change previously adopted plans? Yes, S.19-S.21
- G. Documentation also:
1. Identifies agencies which are responsible for implementing each recommendation Yes, S.12-S.32
 2. Indicates whether those agencies have agreed to implement? N/A
 3. Indicates essential government actions necessary to implement recommendations? Yes, S.12-S.32
- H. Time Frame:
1. Includes agreed-upon schedule to implement alternatives? Yes, S.12-S.32
 2. Indicates period covered by the program? Yes, Cover Letter, S.1-S.32
- I. Funding/Costs:
1. Includes costs to implement alternatives? Yes, S.12-S.32
 2. Includes anticipated funding source? Yes, S.12-S.32
- VI. **PROGRAM REVISION:** [150.23 (e) (9)]
- Supporting documentation includes provision for revision? N/A

Supplemental Chapter

Introduction

Subsequent to the presentation of the Recommendations to the public at a Public Hearing in December 2001 and the development of the Draft Federal Aviation Regulation (FAR) Part 150 Study in April 2004, the Federal Aviation Administration (FAA) revised the national Terminal Area Forecasts (TAF) to reflect anticipated aircraft operational levels at Chicago Executive Airport (formerly known as Palwaukee Airport). The FAA published the TAF for not only Chicago Executive Airport but all other eligible airports in the United States. The TAF projections are based on a national forecast of aviation activity which is allocated to the individual airports in the National Airspace System and are based on previous year's actual activity. After the events of September 11, 2001, aircraft operational levels on a national basis declined. The newly published TAF for PWK (and other airports) reflected that decline.

The revised forecasts were significantly different from the forecasts developed for the original Draft Part 150 Study, and as such, it was determined that the Study be updated to reflect the new forecasts and the resulting noise contours associated with those forecasts. Along with the noise contours, existing population numbers were updated to reflect changed conditions. In addition, the Recommendations have been updated to reflect the removal of Recommendations which are no longer valid and the addition of new Recommendations. The revised Existing Noise Exposure Map and the revised Future Noise Exposure Map reflect 2006 and 2011 operations, respectively.

Revised Land Use Analysis and Noise Exposure Maps

The land use analysis and alternatives evaluation contained in the original study were developed using an existing year April 1999 through April 2000 and a future year contour reflecting 2005. The existing year was chosen because it reflected the most current operational data available at the time the Study was initiated. However, it was prior to the events of September 11, which dramatically skewed operation levels and forecasting efforts nationwide.

One of the key products of a FAR Part 150 Noise Compatibility Plan is the preparation of the Noise Exposure Maps (NEM's). The Noise Exposure Maps identify the existing and future noise exposure (five to 10 years in the future) and have been prepared using the Federal Aviation Administration's Integrated Noise Model (INM) Version 6.2. To prepare a noise contour for a particular year, the INM requires information concerning the number of aircraft operations, the types of aircraft (fleet mix), and the time of day that the activity takes place. As stated in the original document, noise measurements were used to help validate the model. The noise measurements followed Part 150 guidelines.

As mentioned, due to the events that occurred on September 11, most airports across the country showed a significant decrease in aircraft operations levels. This event not only disrupted aviation activity, it minimized any previous forecasts projected by the FAA in their Terminal Area Forecast. In an effort to use the most current information available and as a result of a change in consultants, fiscal year 2006 (October 2005 through September 2006) operations was used to produce the revised Existing Noise Exposure Map (**Figure S1**) and fiscal year 2011 operational projections were used to produce the five-year revised Future Base Case Noise Exposure Map (**Figure S2**), based on the TAF.¹ These two revised maps are shown on the following two pages and were developed using the operations presented in **Table S1**.

¹ Note the 2011 TAF projections, like the 2006 actual operations, are based on the Federal fiscal year, (beginning in October and ending in September).